

REMARKS

Claims 1-41 and 53-63 are pending in the application upon entry of the amendments and new claims. Claims 1, 11, 13, 20, 33, 37, 41, and 59 have been amended to better describe certain aspects of the invention. Favorable reconsideration in light of the amendments and the remarks which follow is respectfully requested.

The Amendments

The independent claims have been amended to better describe the subject matter of the invention by disclaiming separating optical signals that emanate from different optical sources, the separate optical signals having different wavelengths. In other words, two optical signals having different wavelengths are separated by the claimed invention when provided by a single optical source, such as an optical fiber. Support for the amendments exists in the specification, for example, page 5, penultimate paragraph.

The Obviousness Rejection

Claims 1-7, 9-11, 13, 14, 16, 17, 20, 21, 33-41, and 53-60 (including all of the independent claims) have been rejected under 35 U.S.C. § 102(b) over Kunikane et al (U.S. Patent 5,479,547). The remaining dependent claims have been subjected to obviousness rejections using Kunikane et al as primary cited art.

The Examiner notes Figures 1 to 3 and 16-17 of Kunikane et al with particularity. Referring to Figure 1, Kunikane et al relates to an optical de/multiplexer module with a waveguide substrate 21, waveguides 23, a laser diode 24 and photodiode 25 in optical communication with the waveguides 23, a de/multiplexing filter film 26, a first optical fiber 27, and a second optical fiber 28. A first optical signal having a first wavelength sent through the first optical fiber 27 passes through the de/multiplexing filter film 26, and a similar optical signal having the first wavelength sent by the laser diode 24 through the waveguides 23 passes through the de/multiplexing filter film 26 and back into the first optical fiber 27. A second optical signal having a second wavelength sent

through the second optical fiber 28 is reflected by the de/multiplexing filter film 26 so that it does not enter the waveguides 23 and instead is directed to the first optical fiber 27.

Figures 16 and 17 show prior art devices that input different wavelengths from different input sources. Nowhere in Columns 1-2 of Kunikane et al are signals of different wavelengths from a single source discussed. The purpose of Kunikane et al is to decrease the size of the system by eliminating the loop in Figure 17. Kunikane et al achieves this goal by reflecting the second optical signal having a second wavelength sent through the second optical fiber 28 by use of de/multiplexing filter film 26. In other words, the second optical signal having a second wavelength sent through the second optical fiber 28 DOES NOT ENTER the waveguide 23.

To establish a *prima facie* case of obviousness, three basic criteria must be shown. First, there must be some suggestion or motivation, either in the cited art or in the knowledge generally available to one of ordinary skill in the art, to modify the cited art or to combine the cited art. Second, there must be a reasonable expectation of success. Finally, the cited art must teach or suggest all the claim features. See MPEP 706.02(j).

Independent claims 1, 11, 13, 20, 33, 37, 41, and 59 require a bi-directional transceiver device that separates optical signals at a first wavelength from optical signals at a second wavelength from a single source, the first wavelength different from the second wavelength. Kunikane et al fails to teach or suggest a bi-directional transceiver device that separates optical signals at a first wavelength from optical signals at a second wavelength from a single source, the first wavelength different from the second wavelength. While the Examiner contends that one skilled in the art would have modified Kunikane et al to have a single source with two signals, there is NO support to make the modification.

Kunikane et al clearly indicates that the SOURCE of the two optical signals processed by its module are DIFFERENT. Moreover, the problem solved by Kunikane et al (eliminating the loop in Figure 17) has nothing to do with using one source.

The optical signals processed by the module of Kunikane et al have origins of EITHER the laser diode 24, the first optical fiber 27, or the second optical fiber 28. Kunikane et al NEVER SEPARATES optical signals from one another. Moreover, there is NO description in Columns 1-2 in connection with Figures 16 and 17 of Kunikane et al SEPARATING optical signals from one another. The input source in the claimed invention contains at least two different optical signals which are directed at the PLC, the two different optical signals having different wavelengths. The independent claims explicitly requires that the bands of signals centered at the first and second wavelengths (the bands of signals that are separated) are contained in a single input signal source. One skilled in the art would NOT have been motivated to use a single input source to direct at least two different optical signals at the module of Kunikane et al. Since Kunikane et al does not teach or suggest all of the claimed features, Kunikane et al CANNOT render obvious claims 1-7, 9-11, 13, 14, 16, 17, 20, 21, 33-41, and 53-60.

Simply concluding that the module of Kunikane et al can be used with a single source carrying two different optical signals is the improper product of hindsight. Figure 16 shows and describes two different signals from TWO DIFFERENT sources (optical fiber 11 and optical fiber 12). The two directional arrow for wavelength 2 below fiber 11 in Figure 16 is a clear error, as it should be an arrow pointing away from module 5. This interpretation, which is consistent with the description in Column 1, is further supported by the fact that coupler 9 would be unnecessary if two signals were carried on fiber 11. Coupler 9 is present because the second signal is carried by a different source (optical fiber 12). One skilled in the art would readily understand this.

Claims 1-7, 9-11, 13, 14, 16, 17, 20, 21, 33-41, and 53-60 are directed to solving the problem of efficiently handling bidirectional data streams of light by reliably separating optical signals at a first wavelength from optical signals at a second wavelength. Claims 1-7, 9-11, 13, 14, 16, 17, 20, 21, 33-41, and 53-60 thus require a SINGLE source containing the two optical signals that are then separated. Since Kunikane et al does not describe a device for handling two optical signals from a

SINGLE source, the claim feature that a bi-directional transceiver device that separates optical signals at a first wavelength from optical signals at a second wavelength is a further basis on which to distinguish Kunikane et al. In this connection, Kunikane et al would not have motivated one skilled in the art to provide a bi-directional transceiver device that separates optical signals contained in a single input signal source.

The Remaining Obviousness Rejections

Claim 15 has been rejected under 35 U.S.C. § 103(a) over Kunikane et al in view of Kuhara et al (U.S. Patent Pub. 2003/0210866). Claim 18 has been rejected under 35 U.S.C. § 103(a) over Kunikane et al in view of Fouquet (U.S. Patent 6,195,478). Claims 61 and 63 have been rejected under 35 U.S.C. § 103(a) over Kunikane et al in view of Scobey (U.S. Patent 5,583,683). Claim 62 has been rejected under 35 U.S.C. § 103(a) over Kunikane et al in view of Grasis et al (U.S. Patent 6,198,857). Claims 8, 12, and 19 have been rejected under 35 U.S.C. § 103(a) over Kunikane et al in view of Hashimoto et al (U.S. Patent 6,480,639). Claims 22, 24-27, and 29-32 have been rejected under 35 U.S.C. § 103(a) over Kunikane et al in view of Rolston et al (U.S. Patent Pub. 2005/0018993). Claims 23, 24, and 28 have been rejected under 35 U.S.C. § 103(a) over Kunikane et al in view of Rolston et al further in view of Di Domenico et al (U.S. Patent 4,165,496).

All of these rejections are traversed due to the inherent deficiencies of the primary cited art Kunikane et al, discussed above. None of the secondary cited art teaches or suggests a bi-directional transceiver device that separates optical signals contained in a single input signal source. Accordingly, one skilled in the art would not have been motivated by the secondary art to make the devices of the claims. Withdrawal of the obviousness rejections is respectfully requested.

Petition for Extension of Time

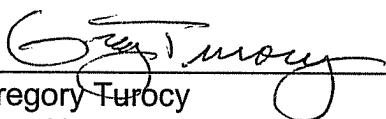
A request for a three month extension of time is hereby made. Payment is being made through the EFS electronic filing system.

Should the Examiner believe that a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

In the event any fees are due in connection with the filing of this document, the Commissioner is authorized to charge those fees for a small entity to our Deposit Account No. 50-1063.

Respectfully submitted,

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